AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (previously presented) A portable induction heating system, comprising:

a power source;

a fluid cooling unit operable to provide a flow of cooling fluid;

a flexible fluid-cooled induction heating device that is electrically coupleable to the power source and fluidicly coupleable to the fluid cooling unit;

a system controller operable to control operation of the induction heating system; and

a flow switch that is electrically coupled to the system controller and operable to sense the flow of cooling fluid,

wherein the system controller controls operation of at least one of the power source and the fluid cooling unit to prevent heat damage to the flexible fluid-cooled induction heating device when the flow of cooling fluid through the flow switch is below a desired flow rate.

2. (previously presented) The system as recited in claim 1, wherein the system controller is operable to control operation of the power source to prevent power from being applied to the flexible fluid-cooled induction heating device when the flow of cooling fluid through the flow switch is below the desired flow rate.

3. (previously presented) The system as recited in claim 1, wherein the system controller is operable to control operation of the fluid cooling unit to increase fluid flow when the flow of cooling fluid through the flow switch is below the desired flow rate.

4. (original) The system as recited in claim 1, wherein the flow switch is located downstream of the induction heating device.

5. (original) The system as recited in claim 1, wherein the controller comprises an indicator to provide an indication when the flow of cooling fluid through the flow switch is below the desired flow rate.

6. (original) The system as recited in claim 5, wherein the indicator is a visual indicator.

7. (original) The system as recited in claim 5, wherein the indicator is an audible indicator.

8. (original) The system as recited in claim 5, comprising a communication circuit operable to contact a user electronically when the flow of cooling fluid through the flow switch decreases below the desired flow rate.

9-21. (cancelled)

22. (previously presented) A method of operating a portable fluid-cooled induction heating system having a portable fluid cooling unit with a supply side and a return side, comprising:

routing a flexible fluid-cooled induction heating apparatus around a work piece;

routing cooling fluid from a portable fluid-cooling unit to the fluid-cooled induction heating apparatus;

routing the cooling fluid from the fluid-cooled induction heating apparatus to a flow sensor operable to sense cooling fluid flow;

providing a desired cooling fluid flow to the fluid-cooled induction heating apparatus; and

automatically removing power from the fluid-cooled induction heating apparatus when the flow sensor indicates that cooling fluid flow is less than the desired cooling fluid flow.

23. (original) The method as recited in claim 22, comprising prohibiting power from being applied to the fluid-cooled induction heating apparatus when the flow sensor indicates that cooling fluid flow is less than the desired cooling fluid flow.

24. (original) The method as recited in claim 22, comprising providing a visual indication on a controller operable to control power to the fluid-cooled induction heating apparatus when the flow sensor indicates that cooling fluid flow is less than the desired cooling fluid flow.

25. (original) The method as recited in claim 22, comprising providing an audible alarm when the flow sensor indicates that cooling fluid flow has dropped below the desired cooling fluid flow.

26. (original) The method as recited in claim 22, comprising providing an electronic signal to a communication device when the flow sensor indicates that cooling fluid flow has dropped below the desired cooling fluid flow.

27. (previously presented) A method of assembling a portable induction heating system at a worksite, comprising:

wrapping a flexible fluid-cooled induction heating cable around a work piece;

fluidicly coupling a first end of the flexible fluid-cooled induction heating cable to a supply side of a fluid cooling unit;

fluidicly coupling a second end of the flexible fluid-cooled induction heating cable to a flow sensor operable to sense fluid flow therethrough, the flow sensor being electrically coupled to a power source controller operable to control power to the flexible induction heating cable; and

fluidicly coupling the flow sensor to the return side of the portable fluid cooling unit.

28. (original) The method as recited in claim 27, comprising wherein the flow sensor is disposed within an enclosure housing the power source controller.

29. (previously presented) A portable induction heating system, comprising:

a power source;

a fluid cooling unit operable to provide a flow of cooling fluid;

an induction heating device that is electrically coupleable to the power source and fluidicly coupleable to the fluid cooling unit;

a wheeled cart adapted to transport the fluid cooling unit and the power source to a work piece;

a system controller operable to control operation of the power source; and

a flow switch that is electrically coupled to the system controller and operable to sense the flow of cooling fluid,

wherein the system controller controls the operation of the power source to prevent power from being applied to the induction heating device when the flow of cooling fluid through the flow switch is below a desired flow rate.

30. (original) The system as recited in claim 29, wherein the system controller removes power from the induction heating device when the flow of cooling fluid through the flow switch drops below the desired flow rate

31. (original) The system as recited in claim 29, comprising an indicator to provide an indication when the flow of cooling fluid through the flow switch is below the desired flow rate.

32. (original) The system as recited in claim 31, wherein the indicator is disposed on the exterior of the system controller.

33. (original) The system as recited in claim 31, wherein the indicator is a visual indicator.

34. (original) The system as recited in claim 31, wherein the indicator is an audible alarm.

35. (original) The system as recited in claim 31, comprising a communication circuit operable to contact a user electronically when the flow of cooling fluid through the flow switch decreases below the desired flow rate.

36-42. (cancelled)

43. (previously presented) The system as recited in claim 1, wherein the flow switch is external to the controller.

44. (currently amended) An induction heating system, comprising:

an induction heating power source;

a fluid-cooled induction heating device electrically coupled to the induction heating power source;

a fluid cooling unit operable to provide a flow of cooling fluid through the fluid-cooled induction heating device;

a communication circuit operable to transmit a wireless alarm signal when an improper operating condition exists in ~~each of~~ the induction heating power source, ~~and~~ or the flow of cooling fluid, or both.

45. (previously presented) The system as recited in claim 44, wherein the wireless alarm signal comprises a cellular phone transmission.

46. (previously presented) The system as recited in claim 44, wherein the wireless alarm signal comprises a radio transmission.

47. (previously presented) The system as recited in claim 44, comprising a flow sensor operable to provide a signal representative of the flow rate of the flow of cooling fluid, wherein the communications circuit transmits an alarm signal when the flow rate of the flow of cooling fluid is below a desired flow rate.

48. (previously presented) The system as recited in claim 47, wherein the flow sensor comprises a flow switch that changes state when the flow rate of cooling fluid flowing through the flow sensor drops below the desired flow rate.

49. (previously presented) The system as recited in claim 47, comprising an audible alarm operable to provide an audible indication when the flow rate of cooling fluid through the flow sensor is below the desired flow rate.

50. (previously presented) The system as recited in claim 47, comprising a visual alarm operable to provide a visible indication when the flow rate of cooling fluid through the flow sensor is below the desired flow rate.

51. (currently amended) An induction heating system, comprising:

an induction heating power source;

a fluid-cooled induction heating device that is electrically coupleable to the induction heating power source;

a fluid cooling unit operable to provide a flow of cooling fluid through the fluid-cooled induction heating device at a desired flow rate; and

an alarm system operable to provide an alarm when ~~each of~~ a signal representative of an improper operating condition in the induction heating power source, ~~and~~ or a signal representative of the flow rate of the cooling fluid being below the desired flow rate, or both is received.

52. (previously presented) The system as recited in claim 51, wherein the signal representative of an improper operating condition in the induction heating power source

comprises a signal representative of current flowing from the induction heating power source exceeding a defined current limit.

53. (previously presented) The system as recited in claim 51, wherein the signal representative of an improper operating condition in the induction heating power source comprises a signal representative of reactive current flowing in the induction heating power source exceeding a defined reactive current limit.

54. (previously presented) The system as recited in claim 51, wherein the signal representative of an improper operating condition in the induction heating power source comprises a signal representative of tank voltage exceeding a defined tank voltage limit.

55. (previously presented) A portable induction heating system, comprising:

an induction heating power source;

a fluid cooling unit operable to provide a flow of cooling fluid;

a fluid-cooled induction heating device that is electrically coupleable to the power source and fluidicly coupleable to the fluid cooling unit;

a system controller operable to control operation of the induction heating system; and

a flow switch that is electrically coupled to the system controller and operable to sense cooling fluid flow rate,

wherein the system controller is operable to control operation of the fluid cooling unit to increase the cooling fluid flow rate when the cooling fluid flow rate is below a desired cooling fluid flow rate.